INTRODUCTION TO CENTRAL MATERIEL SERVICES

OBJECTIVES

- Terminal Learning Objectives
  - Given the appropriate information. You will identify the roles and functions of the surgical technician in Central Material Services.

ENABLING LEARNING OBJECTIVES (ELO)

- Given a list, identify the safety practices necessary to prevent accidents IAW Central Service Technician Manual.

- Given a list, select the functions of Centralized Material Section IAW FM 8-38.

ELO CONT.

- Given a list, select the purpose for and the sequence of steps utilized in CMS to prepare sterile supplies IAW FM 8-38.

- Given a list of Load Control Identification numbers, identify Sterilizer number, Julian Date, Cycle Number and Expiration Date. IAW FM 8-38.

SAFETY PRACTICES

- **Eliminate the hazards.**

  Floor

  Electrical cords.

  Only trained people run the autoclaves.

Safety Practices

- **Establish safety measures for each operator or procedure.**

- Standard (Universal) Precautions.

-Clean instruments under water-avoid spray.

-No reaching into containers unless you can see “in” it.

Function of CMS

- Collection: Receive and issue supplies using DA 1381.
- Receiving/Sorting: Area where equipment is processed.
- Decontamination: Clean off gross contamination
- Cleaning: Thoroughly clean
- Preparation: Area used to peel pack and wrap instruments. Special treatment.

FUNCTION OF CMS

- Functions of CMS continued

Sterilization: Kill microorganisms off of instruments.

Storage: Safekeeping.

Inventory: Daily, weekly, and monthly.

Issue: Reissue supplies.

Description of CMS Area

Receiving and decontamination

1. Receive dirty instruments.
2. Considered contaminated and infectious.
3. Inspect and sort to determine what procedure to use.

Description Of CMS Cont....

- Ultrasonic cleaning:
  - Uses high frequency vibration w/ enzymatic solution to clean instruments called cavitation.

Cavitation: The ultrasonic cleaner passes through the cleaning solution, the molecules are set in very rapid motion causing bubbles. These bubbles implode causing a vacuum , cleaning the instrument.

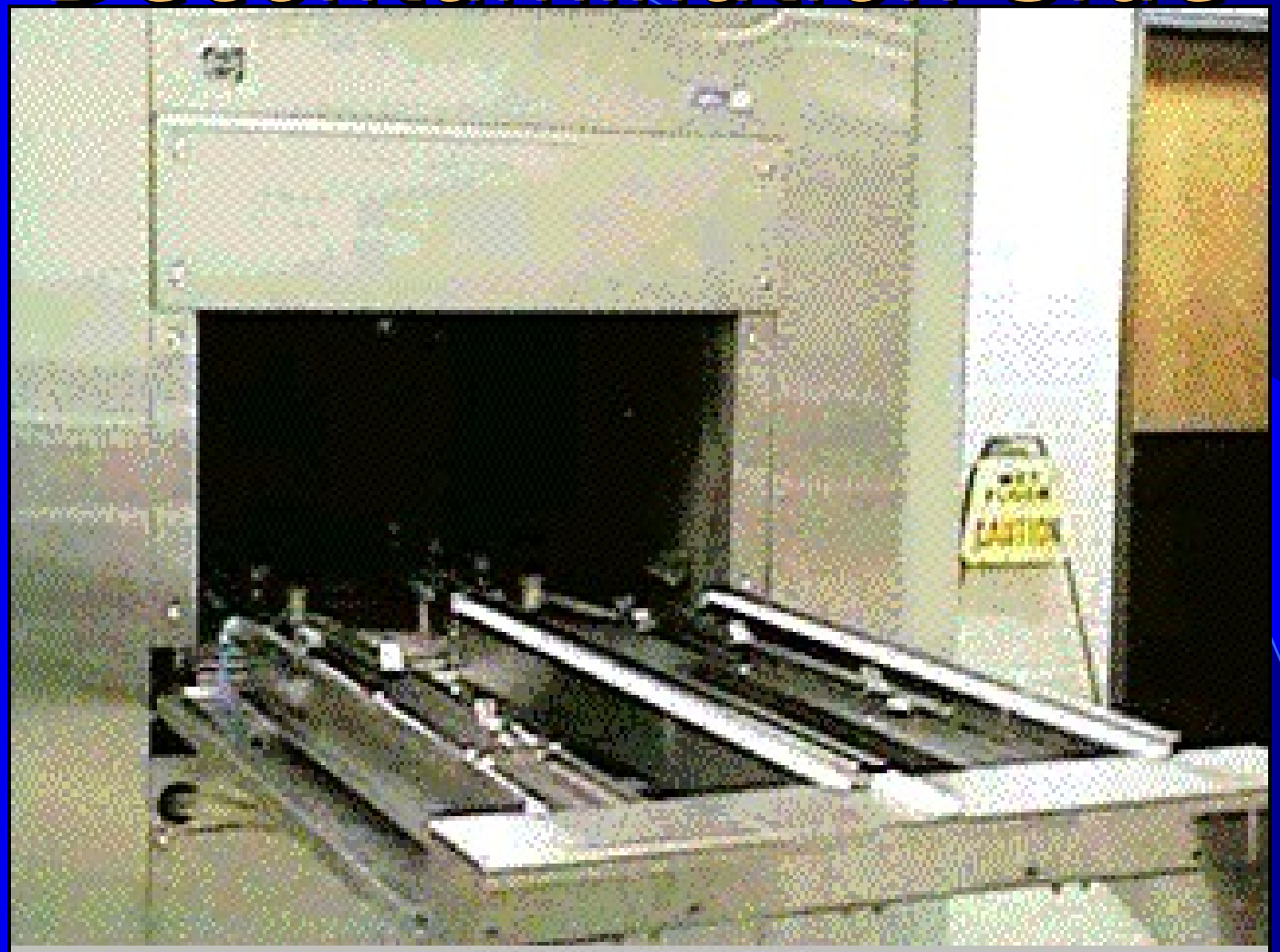
Description of CMS Cont...

- Washer- Sterilizer/ Washer-Decontaminators:
  - Clean by spray force action known as impingement.
  - Impingement: involves several successive steps such as cold water prerinse, detergent wash, rinse and final steam-heat cycle.

Ultrasonic Cleaner

TABLE2.JPG

Washer Sterilizer Decontamination Side



WASHER.JPG

Description of CMS Area continued

- Preparation/Sterilization Area

a. Brought to appropriate work stations.
b. Inspect for cleanliness, function, and defects.
c. Assemble and package.
d. Label and sterilize.
e. After sets sterilized, remove and move to sterile area.

Description of CMS Area continued

- Processed Stores

a. Contains clean area for sterile goods.

b. Dispatch/distribution to customer

WORKFLOW STEPS

Purpose-

a. Maintains distinction of dirty and clean areas by one-way flow.

b. Segregation of areas by physical barriers.

WORKFLOW STEPS Cont.

- Receiving/decontamination:

Receive and sort.

Decontaminate/clean instruments.

Washer sterilizer used.

Transfer to unsterile area.

Safety considerations:

Exposure to blood

Exposure to disease

WORKFLOW STEPS

PREVENTION

Never place hands in a contaminated Object without being able to see

Dispose of sharps

Never put hands in trash container

Use extreme caution when disarming knife

WORKFLOW STEPS Cont...

- Prevention cont...

Inspect floors

Unloading and loading carts

Cleaning instruments below water surface

WORKFLOW STEPS Cont....

PREPARATION

Assemble trays and sets

Package or wrap equipment

Label and terminally sterilize

WORKFLOW STEPS Cont…

STERILIZATION

Steam Sterilizer: Saturated steam under pressure is the most preferred.

Ethylene Oxide Sterilization (ETO): Method of choice for sterilization for Items that are heat and moisture sensitive.

Steam Sterilizer

CLEAN.JPG

WORKFLOW

DRY HEAT STERILIZATION

Use for petroleum products and talcum powder

IONIZING RADIATION

For heat and moisture sensitive items

Workflow Cont.....

- Sterris:This process will sterilize immersible surgical and diagnostic devices and rinses the devices with sterile water.
- Sterrad: Hydrogen peroxide gas plasma sterilization with low temperatures. Used for fragile instruments such as endoscopes.

Sterrad Sterilizer

STERRAD.JPG

STERILIZATION SAFETY

SAFETY/Precautions

Wear gloves when using sterilizer

Use only authorized personnel

Sterilization Safety/Precaution cont..

- Inspect all equipment for frays
- Use arms and legs to lift instruments
- Procedures for reading,recording, and disposing of biological indicators
- Authorized personnel should operate equipment

DATING OF SUPPLIES

Expiration is clearly marked

Affixed to the package

STORAGE OF SUPPLIES

ALLOW SETS TO COOL

The date sterilized must be marked on all supplies once cooled

TRANSFER TO STERILE AREA

STERILE STORAGE

CLEAN AND LINT FREE

PROTECTED FROM TEMPERATURE AND HUMIDITY

CONTROLLED TRAFFIC AREA

ROTATION OF SUPPLIES

ON-SITE STERILIZED- 6 TO 12 MONTHS

COMMERCIALLY STERILIZED- INDEFINITELY OR AS LONG AS THE INTEGRITY OF THE PACKAGE IS GOOD

SYSTEMS OF DISTRIBUTION

EXCHANGE CART- exchange of freshly loaded supply cart for a depleted one.

PAR LEVEL SYSTEM- A standard level is set for each supply stored.

REQUISITION SYSTEM- Order as needed. Not very efficient

CASE CART SYSTEM- provide support to Operating Room.

LOAD CONTROL IDENTIFICATION (LCI)

- All supplies subject to a sterilization cycle will be stamped or marked with a load control number after the sterilization cycle. The load control number consist of six digits as follows:

LCI CONT.

- a. The first digit indicates the numerical designation of the sterilizer.
- b. The second, third, and fourth digits indicate the Julian calendar of the year, i.e.. 001-365
- c. The fifth and sixth digits indicate the number of times a sterilizer was loaded and operated during a 24-hour period.

LCI CONT.

LOAD CONTROL # STERILIZER #

100101 1

200102 2 336511

3

JULIAN DATE CYCLE

001 01

001 02

365 11

Review of Main Points

- Safety practices.
- Functions of CMS.
- Workflow steps for processing of supplies.
- Load Control Identification

QUESTIONS?